

Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for operating an internal combustion engine in which an air-fuel ratio in a combustion chamber is a function of at least one of (a) operating conditions and (b) an operating state of the engine, the method comprising:

using a data model, determining a variable expressing a target air-fuel ratio from a target torque and an air mass ascertained with the aid of one of a model and a measured value, and determining a setpoint fuel quantity to be injected into the combustion chamber; and

using the data model, determining a setpoint air mass to be conducted to the combustion chamber from the target torque and the variable expressing the air-fuel ratio in the combustion chamber.

2. (Currently Amended) ~~The method according to claim 1,~~ A method for operating an internal combustion engine in which an air-fuel ratio in a combustion chamber is a function of at least one of (a) operating conditions and (b) an operating state of the engine, the method comprising:

using a data model, determining a variable expressing a target air-fuel ratio from a target torque and an air mass ascertained with the aid of one of a model and a measured value, and determining a setpoint fuel quantity to be injected into the combustion chamber; and

using the data model, determining a setpoint air mass to be conducted to the combustion chamber from the target torque and the variable expressing the air-fuel ratio in the combustion chamber;

wherein the variable expressing the air-fuel ratio is an inverse of an air ratio λ .

3. (Currently Amended) ~~The method according to claim 1,~~ A method for operating an internal combustion engine in which an air-fuel ratio in a combustion chamber is a function of at least one of (a) operating conditions and (b) an operating state of the engine, the method comprising:

using a data model, determining a variable expressing a target air-fuel ratio from a target torque and an air mass ascertained with the aid of one of a model and a measured value, and determining a setpoint fuel quantity to be injected into the combustion chamber; and

using the data model, determining a setpoint air mass to be conducted to the combustion chamber from the target torque and the variable expressing the air-fuel ratio in the combustion chamber;

wherein, when determining the setpoint fuel quantity, the variable expressing the air-fuel ratio is limited by an emission-specific limit value.

4. (Original) The method according to claim 3, wherein the emission-specific limit value is determined from the air mass, ascertained with the aid of one of a model and a measured value, and from a rotational speed of a crankshaft of the engine.
5. (Original) The method according to claim 4, wherein the emission-specific limit value is determined further from a position of an onset of a fuel injection relative to an angle of the crankshaft.
6. (Original) The method according to claim 3, further comprising filtering a torque desired by a user of the engine.
7. (Original) The method according to claim 1, wherein, when determining the setpoint fuel quantity, the variable expressing the air-fuel ratio is limited by at least one limit value, which is a function of an operating mode.
8. (Original) The method according to claim 3, further comprising populating the data model, in a vicinity of a limiting of the variable expressing the air-fuel ratio, in such a way that a soft transition to the limiting is produced.
9. (Original) The method according to claim 1, wherein the data model includes at least one of a characteristic set and a map.

10. (Currently Amended) ~~A computer program stored on a storage medium and containing instructions to perform the following steps:~~ A computer-readable medium storing instructions adapted to be executed by a processor, the instructions, when executed, defining a method to operate an internal combustion engine in which an air-fuel ratio in a combustion chamber is a function of at least one of (a) operating conditions and (b) an operating state of the engine, the method comprising:

using a data model, determining a variable expressing a target air-fuel ratio from a target torque and an air mass ascertained with the aid of one of a model and a measured value, and determining a setpoint fuel quantity to be injected into the combustion chamber; and

using the data model, determining a setpoint air mass to be conducted to the combustion chamber from the target torque and the variable expressing the air-fuel ratio in the combustion chamber.

11. (Cancelled).

12. (Currently Amended) A control/regulating device for an internal combustion engine ~~programmed to perform the following steps, comprising:~~

a means for determining, using a data model, ~~determining~~ a variable expressing a target air-fuel ratio from a target torque and an air mass ascertained with the aid of one of a model and a measured value, and determining a setpoint fuel quantity to be injected into the combustion chamber; and

a means for determining, using a data model, ~~determining~~ a setpoint air mass to be conducted to the combustion chamber from the target torque and the variable expressing the air-fuel ratio in the combustion chamber.